

UTC Project Information	
Project Title	Response of Autonomous Vehicles to Emergency Response Vehicles
University	Texas A & M University, College Station
Principal Investigator	Sivakumar Rathinam
PI Contact Information	srathinam@tamu.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	Federal: \$219,394 TAMU (Non-Federal): \$53,364
Total Project Cost	\$272,758
Agency ID or Contract Number	Grant No: 69A3551747115 Project: 03-051
Start and End Dates	01/01/2018 – 05/31/2019
Brief Description of Research Project	This project aims to explore how an autonomous vehicle must safely respond to different classes of emergency vehicles using sound, vision and other onboard sensors. System safety is the main theme where we work with TEEX Law Enforcement and Security Training, and through them with local police/fire department.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	<p>Deliverables:</p> <p>Guidelines of the desired response of an autonomous vehicle to emergency response vehicles</p> <p>Learning algorithms that extract the distinct features of sound and vision data corresponding to each type of emergency vehicle</p> <p>Algorithms for real time identification, classification and localization of emergency vehicles</p> <p>Control algorithms that autonomously maneuvers and stops a vehicle safely in response to emergency vehicles</p> <p>Report on the performance of the proposed sensing and control algorithms</p> <p>Final Project Report</p> <p>Final Dataset and Metadata Uploaded to VTTI Dataverse</p>

	<p>Audio, vision and other experimental data developed for lecture notes and assignments for courses such as optimization, robotics and control system design.</p> <p>Research publications outlining all the developed results.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>The results of this project, in terms of the algorithms and AV response to emergency vehicles, will benefit OEMs and first responders across the nation to understand and anticipate the behavior of autonomous vehicles, and act in harmony to ensure improved traffic safety.</p>
<p>Web Links</p> <ul style="list-style-type: none">• Reports• Project website	